YA GANG

YG-LED101B
Multi-color LED Lamp

USER MANUAL

Please read over this manual before operation the light CE

Product Introduction:

System structure: comprising of LED101B multi-function color-changing LED tube, external power supply (with ON/OFF switch) and LED101KT controller.
Applications: Suitable for large or small indoor architectural applications, such as: stage, disco, bar, nightclub, restaurant, etc

User Manual Contents:

A) LED101B (LED tube) Installation and Operation
B) External Power Supply Installation and Operation
C) LED101KT Operation
D) Trouble Shooting

A LED101B (LED tube) Installation and Operation

1 - Technical specifications

1. Dimensions: 1000×50×75mm
2. Voltage: +12V
3. Power: P≤12W
4. IP rating: IP33 (interior use)
5. Average lifespan: 50,000～100,000 hours
6. Weight: 1.8Kg
7. LED quantity: 144

2 Important Note

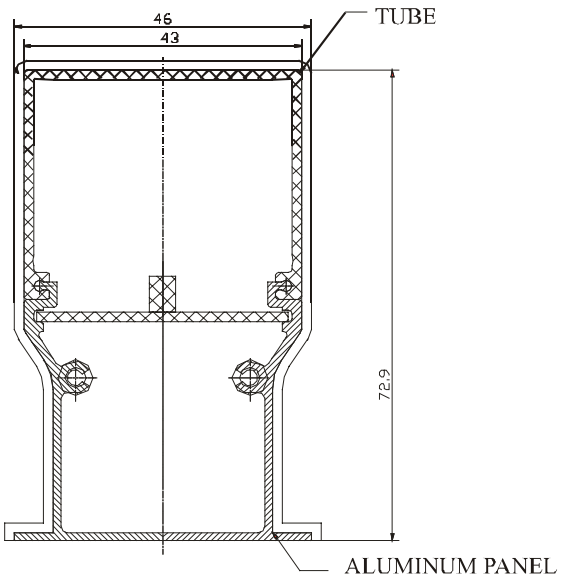
1. Please help protect the environment by recycling the packaging material that this product was delivered with.
2. Carefully read this user manual and keep it safe for future reference.
3. DO NOT install this equipment close to strong magnetic fields or objects carrying high voltages.
4. Installation should be carried out by a qualified professional.
5. We strongly advise against opening of the unit. There are no serviceable parts that may be maintained by the user.
6. All components used in production of this product are in accordance with International Safety Standards. In the event that the user has substituted any of the components for others than those supplied by the manufacturer, the manufacturer cannot accept responsibility for any damages.

7. In the event of any serious operating problem, stop using the unit immediately and contact your dealer.
8. The maximum load current of the power cable is 16A. One External Power Supply can be connected to 16×LED101B tubes in series. If the quantity of tubes exceeds 16, then an extra External Power Supply must be added for every 16 tubes.

3 Structure

The LED101B is comprised of LEDs of the three primary colors Red, Green & Blue, a main PC board, a strong aluminum alloy base frame with mounting brackets and an External Power Supply.

1. Signal IN: low voltage signal input, connect the Signal IN from one LED101B tube to the Signal OUT of the previous tube or the LED101KT controller.
2. Signal OUT: low voltage signal output, connect the Signal OUT from one LED101B tube to the Signal IN of the next tube. If there are no further tubes to be connected, the Signal OUT connector of the last tube must be sealed to protect against humidity.
3. Mains IN: connect the Mains IN from one LED101B tube to the Mains OUT of the previous tube or the Mains OUT from the External Power Supply.
4. Mains OUT: connect the Mains OUT from one LED101B tube to the Mains IN of the next tube. If there are no further tubes to be connected, the Mains OUT connector of the last tube must be sealed to protect against humidity.
5. Mounting brackets: used to fix the LED101B tube to a rigid surface
6. Earth cable: used to connect the equipment to Earth



4 Installation

1. Testing the LED tube: connect the LED101B tube to the power supply without connecting the signal cable. If the LED101B tube turns on and the color seen is white, the tube is functioning correctly.
2. Testing the LED tubes and controller: connect the signal cable and turn on the controller. Press the MODE key and select TEST MODE, followed by pressing the SETUP key. The display will show IS CONNECT OK? The tubes will light up red if all connections are correct.
3. Setting the LED101B: press the MODE key and select ADDRESS MODE, press the SETUP key. The display will show INITIALIZING ADDR WAITING. After 2/3 seconds the display will show OK DONE, indicating that setup is completed.
4. Selecting LED101B program: press the MODE key and select the desired program.

(Note: these steps must be followed every time the LED101B is setup in a different location or if the order or number of the LED101B tubes is changed. If there is no change to the LED101B arrangement, then user may proceed immediately to step 4 when operating.

B External Power Supply Installation and Operation

WARNING

1. The maximum load current of the power cable is 16A. One External Power Supply can be connected to 16×LED101B tubes in series. If the quantity of tubes exceeds 16, then an extra External Power Supply must be added for every 16 tubes
2. The External Power Supply will give out heat, it is advisable to place the External Power Supply in a position that will allow the heat to disperse easily, i.e. in a position that has good air circulation.
3. DO NOT place easily combustible objects on or close to the External Power Supply.
4. The External Power Supply is NOT RESISTANT, please do not operate outdoors.
5. This External Power Supply is 110V/220V, before use, please select the correct power supply voltage.

1 Technical Specifications

1. Dimensions: 200x50x110 (mm)
2. Rated Voltage: 110V/220V 50/60Hz

Maximum Output Current: 16.5A

2 - Electrical Connections

1. Confirm that all electrical wires are connected correctly and securely (see Figure 1.) Connect as follows;

Live (L) > AC MAINS.....Live wire
Neutral (N) > AC MAINS.....Neutral wire
Earth (E) > Ground
DC (+V) > LED101B +12V

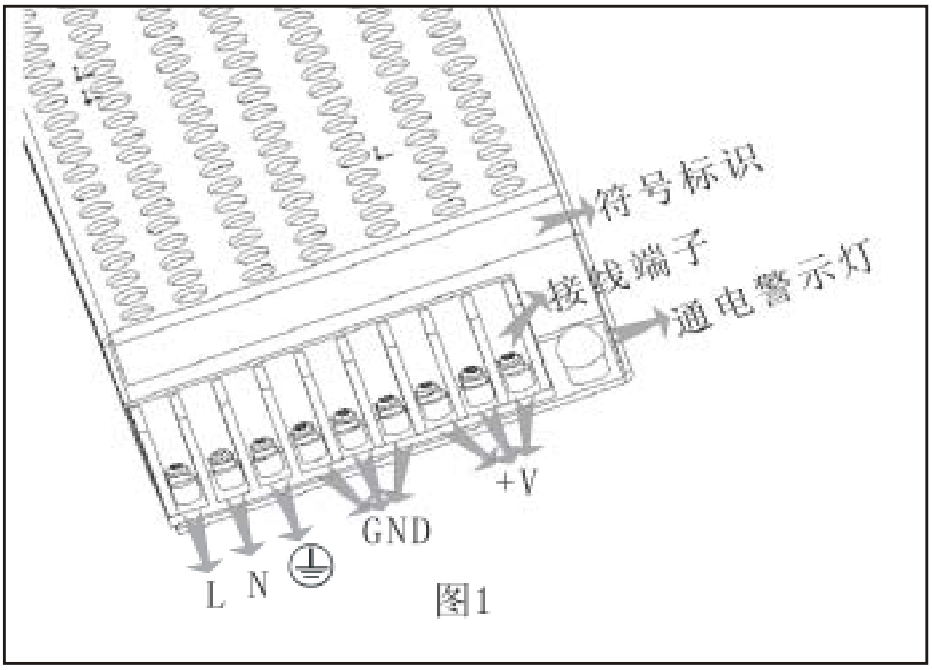
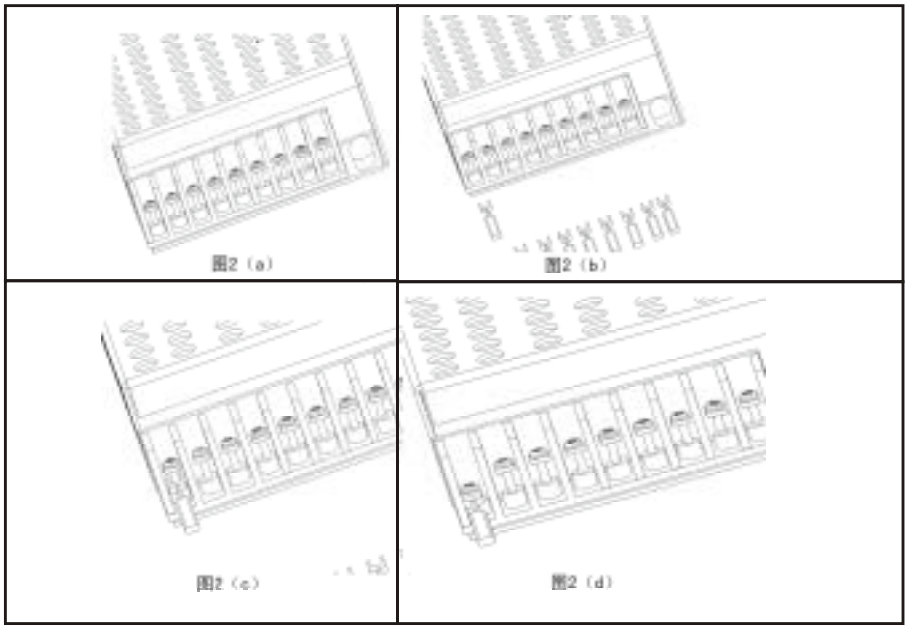
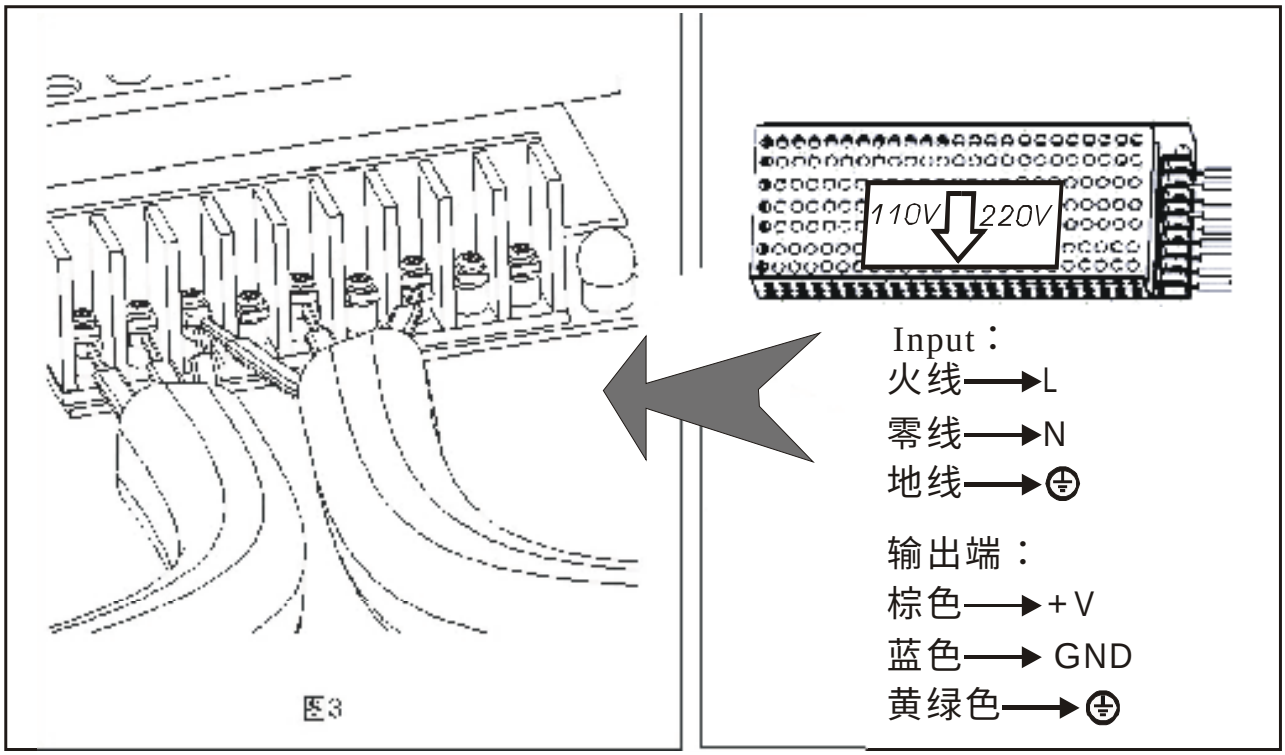


图1

2. Loosen the screws to each electrical connection (see Figure 2a). Position each of the U-shaped connectors in the correct position (see Figure 2b) Push the U-shaped connector into place under the washer (see Figure 2c). Tighten the fastening screws (see Figure 2d).

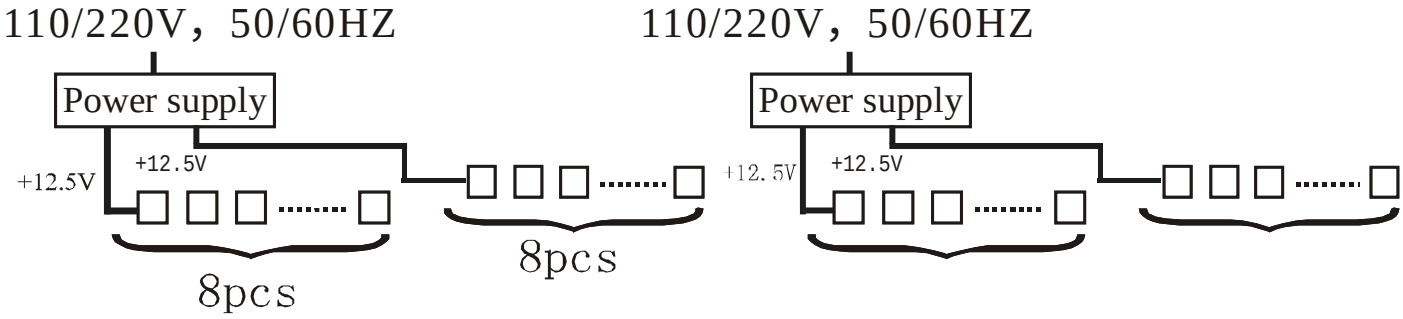


3.Make sure that the External Power Supply is situated in a well-ventilated area and that it is not on or close to any objects that are easily-combustible. Select the correct supply Voltage position AC? 10V / AC? 20V. Connect the OUTPUT connections of the External Power Supply to the INPUT of the LED101B tube. (see Figures 3,4).



4. Electrical Installation Diagram

NOTE: 1 External Power Supply (16.5A) can power upto a maximum of 16 LED101B tubes. The External Power Supply output supplies two power cables with each cable connecting upto a maximum of 8 tubes.



LED101KT Controller

1 Technical Specifications

1. Dimensions: 180x125x49(mm)
2. Voltage: AC? 00/110/120, 50Hz/60Hz
   AC? 10/230/240, 50/60Hz
3. Rated Power: P≤1.5W

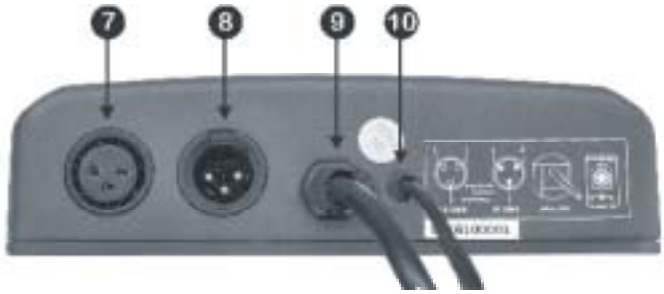
2 Functions

1. Compatible with DMX512 standard
2. 38 pre-stored programs
3. Independantly set program settings
4. Connect upto 4000 tubes
5. Automatically store program settings
6. RGB color-mixing (when used with DMX512)

3 - Notice

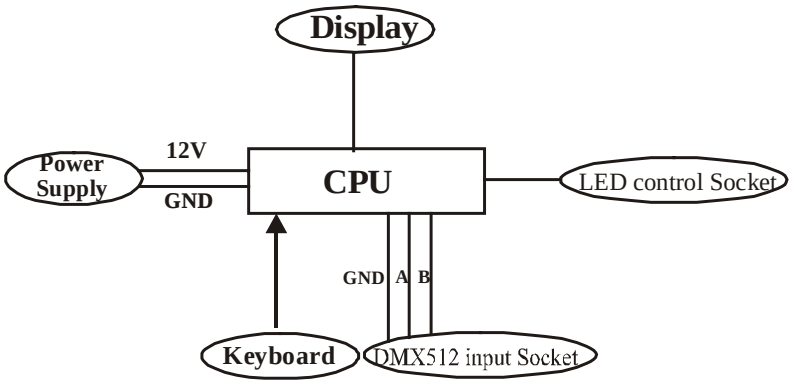
1. This controller is for interior use
2. In order to avoid electric shock or other dangers, this product should not be used in the rain or in a damp environment.
3. Do not place the controller on a metal surface or in water.
4. In the event of the controller being in contact with water or being positioned on a metal surface, immediately turn off the power supply.
5. Do not use this controller in a dusty environment and make sure that the product is cleaned at regular intervals.
6. DO NOT OPEN THE CONTROLLER There are no parts which can be maintained by the customer.
7. In the unlikely event of any malfunction, please contact your supplier .

4 Product Explanation



1.LCD screen:indicate current working mode, program, settings
2.MODE:select the desired working mode or program
3.SETUP: set the settings in currently selected program (time interval / speed / strobe / tube quantity)
4. UP: move “UP” through the SETUP options
5. DOWN: move “DOWN” through the SETUP options
6. POWER ON/OFF:turn the LED101KT controller ON & OFF. When the unit is turned off the current settings will be automaticallystored.
7. DMX IN:connect the DMX512 signal cable
8. DMX OUT: connect the DMX512 signal cable to the next unit
9. OUTPUT:connect to the signal of the first LED101B tube
10. DC INPUT: connect the 12V/500mA DC Power Supply

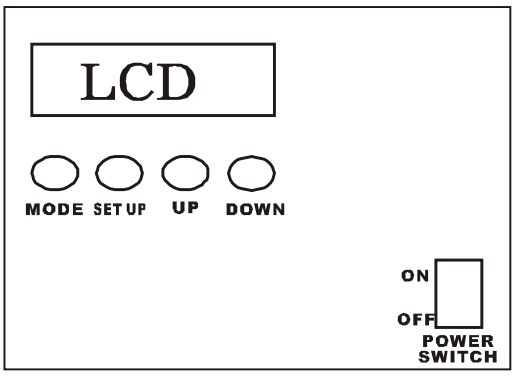
VII. STRUCTURE MAP OF CONTROLLER:



5 Data Control Cable

Data Line	Function
1	GND
2	B Femail Signal
3	A Mail Signal

6 Operation



MODE

Number	Function
1	BLACKOUT
2	STATIC RED
3	STATIC GREEN
4	STATIC YELLOW
5	STATIC BLUE
6	STATIC PURPLE
7	STATIC CYAN
8	STATIC WHITE
9	FAST CHANGE
10	SLOW FLOW1
11	FAST FLOW1
12	FAST FLOW2
13	BLACK RUN1
14	ROLL CHASE
15	ROLL COLOR
16	COLOR 1/4
17	SLOW CHANGE
18	COLOR 1/2
19	COLOR FLASH
20	B & W FLOW
21	R & G FLOW
22	G & B FLOW
23	R & B FLOW
24	R & G CHASE1
25	R & G CHASE2
26	R & B CHASE1
27	R & B CHASE2
28	R & W CHASE1
29	R & W CHASE2
30	B & G CHASE1

Number	Function
31	B & G CHASE2
32	W &G CHASE1
33	W &G CHASE2
34	RAINBOW CHASE1
35	RAINBOW CHASE2
36	RAINBOW CHASE3
37	RAINBOW CHASE4
38	RAINBOW CHASE8
39	AUTO MODE
40	TEST MODE
41	ADDRESS MODE
42	FACTORY MODE
43	GRAPH MODE
44	DMX512 MODE

SETUP

2. To adjust according to the SETUP button:

Number	Show Data	Illustration	
		Max	Min
1	FLASH	100	0
2	INVERVAL	100	0
3	RUN SPEED	100	0
4	TUBE QTY	Over 4000	0
5	DMX ADDR	255	1

UP

Move “ UP ” through the SETUP options. Press SETUP to confirm.

DOWN

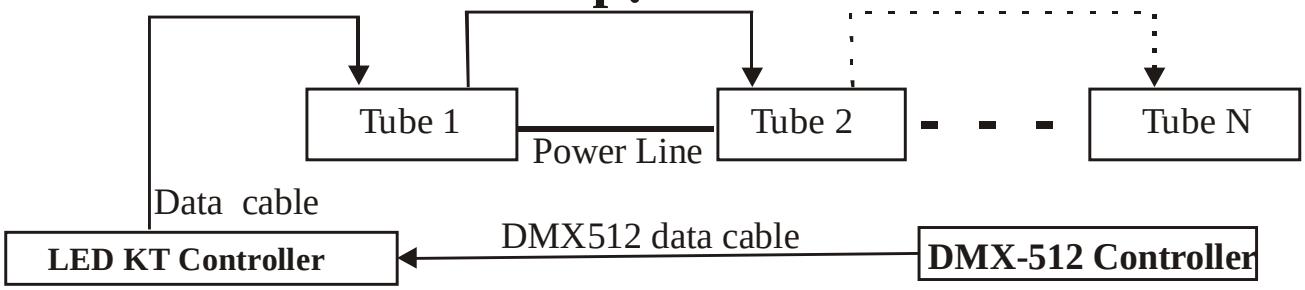
Move “ DOWN ” through the SETUP options. Press SETUP to confirm.

DMX ADDRESSING

>press the MODE key and select DMX MODE
>press the SETUP key
>use the UP / DOWN key to set the DMX CHANNEL of the MODE option. (The 4 Channel arrangement is MODE,SPEED,INTERVAL, FLASH / 0 ,RED,GREEN,BLUE)
>press the SETUP key

7 Installation Diagram

X. INSTALLATION Map:



8 DMX512 CONTROL MODE

MODE 1: MODE, SPEED, INTERVAL, FLASH
MODE 2: 0 , RED, GREEN, BLUE

When the Channel 1 fader on the DMX512 controller is NOT at 0 (Channel 1 is not at its lowest value) then the DMX512 control mode will be MODE 1. When the Channel 1 fade on the DMX512 controller is 0 (Channel 1 is set at its lowest value) then the DMX512 control mode will be MODE 2.

The DMX512 address can be set between 1 and 255, with 1 as the default DMX512 address.

MODE 1:

Channel 1: DMX512 values (0～255)

Note: for values 0～47 (static colors) Channels 2 & 3 have no function.

9 DMX512 ADDRESSING

- Connect the LED101KT to the power supply
  - Use the MODE key to select DMX512 mode
  - Press SETUP, LCD screen will display the DMX512 ADDRESS
  - Using the UP / DOWN keys select the correct DMX512 Address
  - Press the SETUP key

Value	Statement
0~5	BLACKOUT
6~11	STATIC RED
12~17	STATIC GREEN
18~23	STATIC YELLOW
24~29	STATIC BLUE
30~35	STATIC PURPLE
36~41	STATIC CYAN
42~47	STATIC WHITE
48~53	FAST CHANGE
54~59	SLOW FLOW1
60~65	FAST FLOW1
66~71	FAST FLOW2
72~77	BLACK RUN1
78~83	ROLL CHASE
84~89	ROLL COLOR
90~95	COLOR 1/4
96~101	SLOW CHANGE
102~107	COLOR1 1/2
108~113	COLOR FLASH
114~119	B & W FLOW
120~125	R & G FLOW
126~131	G & B FLOW
132~137	R & B FLOW
138~143	R & G CHASE1
144~149	R & G CHASE2
150~155	R & B CHASE1
156~161	R & B CHASE2
162~167	R & W CHASE1
168~173	R & W CHASE2
174~179	B & G CHASE1
180~185	B & G CHASE2
186~191	W &G CHASE1
192~197	W &G CHASE2
198~203	RAINBOW CHASE1
204~209	RAINBOW CHASE2
210~215	RAINBOW CHASE3
216~221	RAINBOW CHASE4
222~255	RAINBOW CHASE8

2、Second channel control the speed:

Value	Speed
0	0
255	100

3、Third channel control the time interval:

Value	Time Interval
0	0
255	100

4、Fourth channel control the strobe:

Value	**Strobe**
0	0
255	100

Trouble shooting

Situation	Cause	Solution
No light output (all tubes)	1、power-plug has no power 2、led101KT has no signal output 3、The first tube is damaged 4、Controller is in black mode	1、replace the power-socket 2、replace the controller 3、replace the first tube 4、change the program mode
First section of tubes lit, rest of tubes black	1、controller quantity or tubes set incorrectly 2、loose or broken power or signal cable at first black tube 3、first black tube is damaged	1、set the correct amount of tubes. 2、reconnect the power and signal plugs orreplace with a working tube 3、replace the damaged tube with a good tube
Center or tube black, rest of tube lit	**PCB at black portion is damaged**	**Replace the LED101b tube**
Portion of tube`s color is incorrect or black	**PCB LEDs damaged**	**Replace the damaged LEDs**
Unstable operation not responding to controlsignal	1,LED101KT is damaged 2,Local signal interference 3,power load is exceeded, power cable damage	1,replace the controller 2,remove source of signal interference 3,increase the number of connections tomains power supply,reduce the power load by reducing the quantityof tubes on mainspower connections

Replacing Damaged LEDs

1. Locate the position of the damaged Led. Determine the color of the damaged LED (e.g. when the tube is in WHITE mode, if one section is purple, then the GREEN LED is damaged)
2. Open the tube at both ends
3. Using an electric soldering iron, remove the LED PCB's down-lead. Note the corresponding position and color of the LED PCB's down-lead (BLACK EARTH / RED(thin) - +12V / WHITE A+ / RED (thick) B-)
4. Remove the LED PCB from the tube
5. Use a soldering iron to remove the damaged LEDs
6. Replace with good LEDs and solder into place. Make sure that the LED +ve pin (long pin) is soldered into the +ve hole on the LED PCB.
7. Cut-off any excess pin that sticks out of the underside of the PCB.
8. Replace the PCB into the tube.

ELECTRICAL DIAGRAM